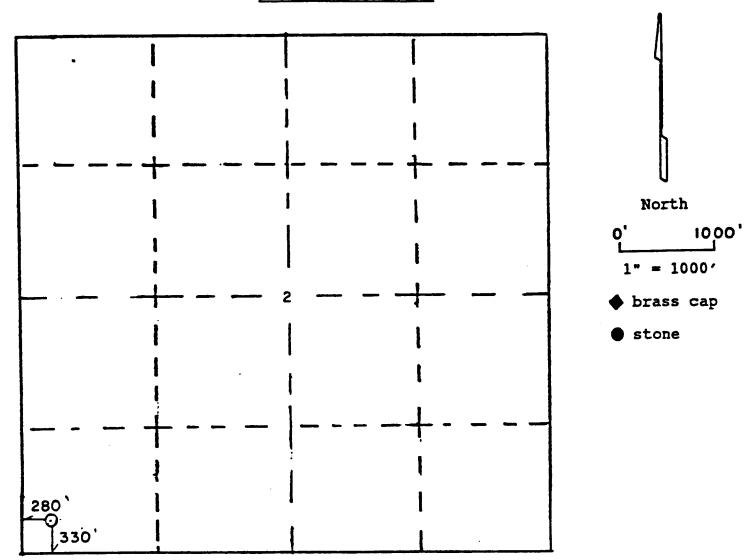
DIVISION OF OIL, GAS AND MINING

					5. Lease Designation	ind Semal No.
		·	-		ML-41082	
	N FOR PERMIT	O DRILL, DEEP	EN, OR PLU	G BACK	6. If Indian, Alinttee	or Tribe Name
In Type of Work	RILL 🔀	DEEPEN [2011		7. Unit Agreement Na	ne .
a. Type of Well	Mice (A	Desired [PLUC	BACK [N/A	
애 쩟	West Other		Single Zone	Multiple 🔲	3. Farm or Lease Nar	ne
L Name of Operator		· · · · · · · · · · · · · · · · · · ·			Runway 2M	
Chuska Energy	Company					
	1d Uichron Form	inata NN 97/0	1	_	2M 10. Field and Pool, or	Wildest
S. LOCALION OF WOLL IN	ld Highway, Farm	Transmission with any State	requirements.*)		Wildcar Un	disconstil
330	'FSL 280' FWL	- G)G)			11. VQ. Sec., T., R., M.	. or 31k.
At proposed prod. 201					. 22 22 13	·
14. Distance in miles at	nu nirection from neurest to-	en or post office.			2-405-25F	15. State
	orth of Aneth, U				-	
15. Distance from proudiceation to nearest	Osed e		o. of acres in lease	17. No. 6	San Juan	<u> Utah</u>
Property or lease line	r. line. if any)	·		· Co thi	s well	•
13. Distance from propo-	oseu ocatione		roposeu uepta	_ `	7 OF CABLE LODIS	
or applied for, on th	tener DF, RT, GR, etc.)	~ 6	299 AKAh	Ro	tary	
5236' GR/ 5249				,	22. Approx. date wor May 19, 1992	'K Will Start"
27.		PROPOSED CASING AND) (TYT):::VC 380		10, 10, 10,2	·····
Size of Hose	Size of Casing	Weight per Foot				· · · · · · · · · · · · · · · · · · ·
12 1/4	8 5/8	24ppf	Setting Depth		Quantity of Comes	
7 7/8	5 1/2	15.5ppf	5450 6\		k-55, 371 s	<u> </u>
			THITTE	•		
	SEE ATTACHED I				LED DRILLING IS LAR 2 6 1992 DIVISION OF GAS & MINING	
Signal Signal Signal	nat this report is true and true and true and true and true are as a second and true are and true are are are are are are are are are ar	Title	n on sunsurface loca	Manager APPRO	Date 3-10	0-92 STATE ON OF
(3/89)		*See Instructions	On Reverse Side		PACING 64	11 Kews-

Well Location Plat



WELL LOCATION DESCRIPTION:

CHUSKA ENERGY CO., Runway 2-M

330'FSL & 280'FWL

Section 2, T.40 S., R.25 E., SLM

San Juan County, UT

5236' ground elevation

State plane coordinates from seismic control:

X = 2,683,678 Y = 250,530

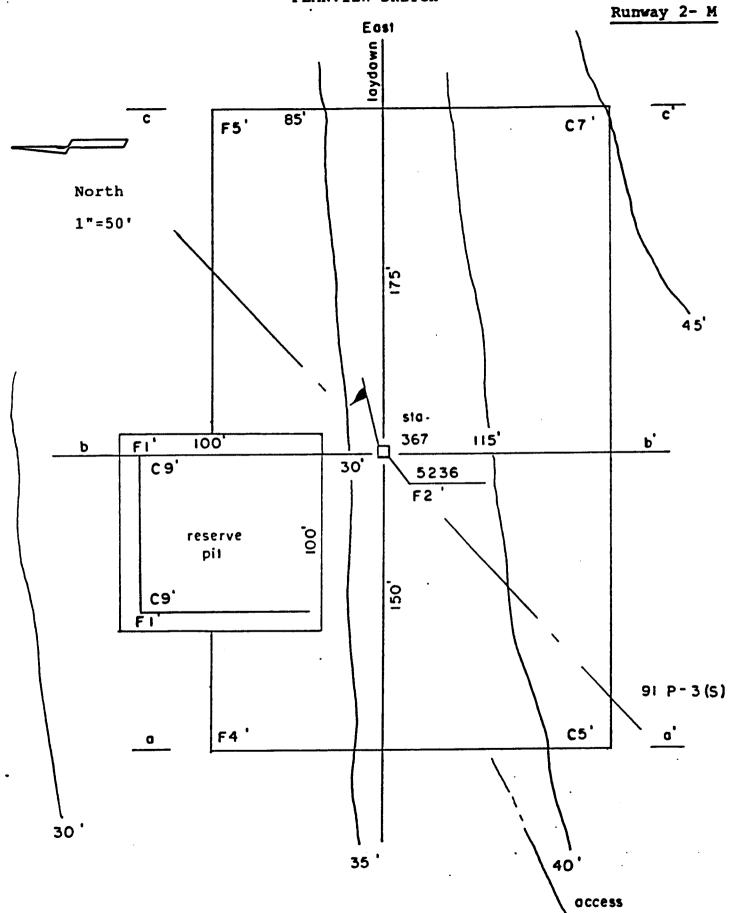
sta. 367 line 91 P-3(S)

The above is true and correct to my knowledge and belief

Gerald G. Huddleston

ERED LAND

10 December 1991



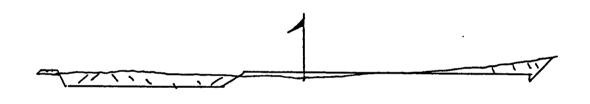
Cut /////
Fill *; '&

1"=50' vert. & horz.

150000

C

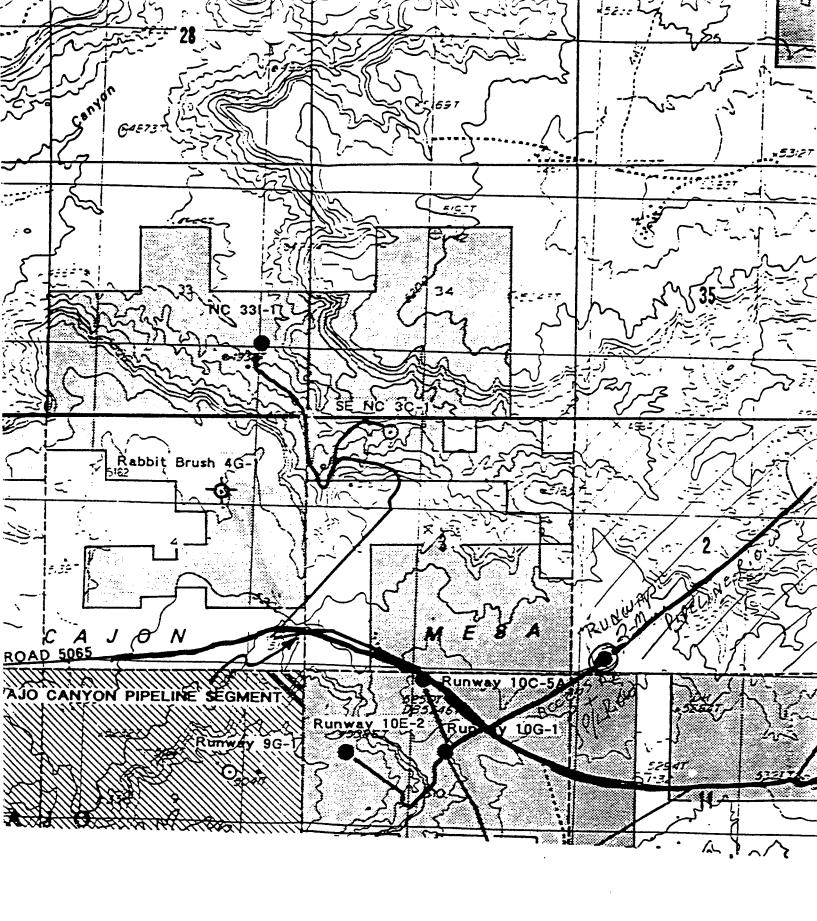
c'



b

p,

The state of the s



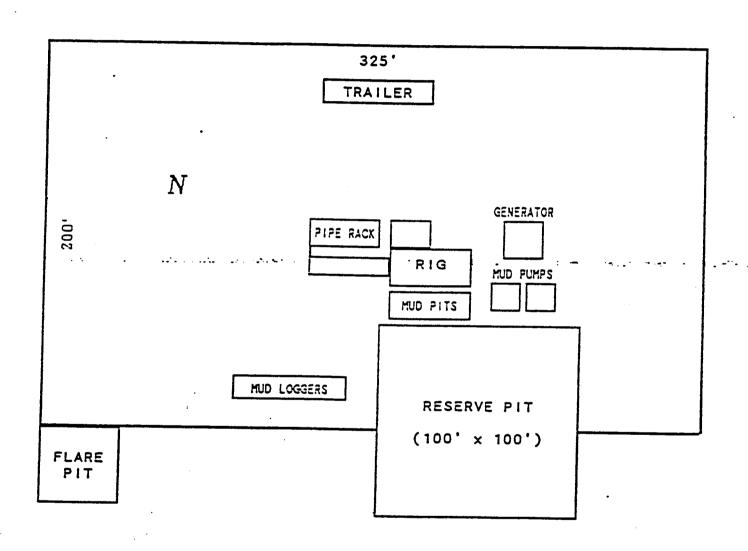
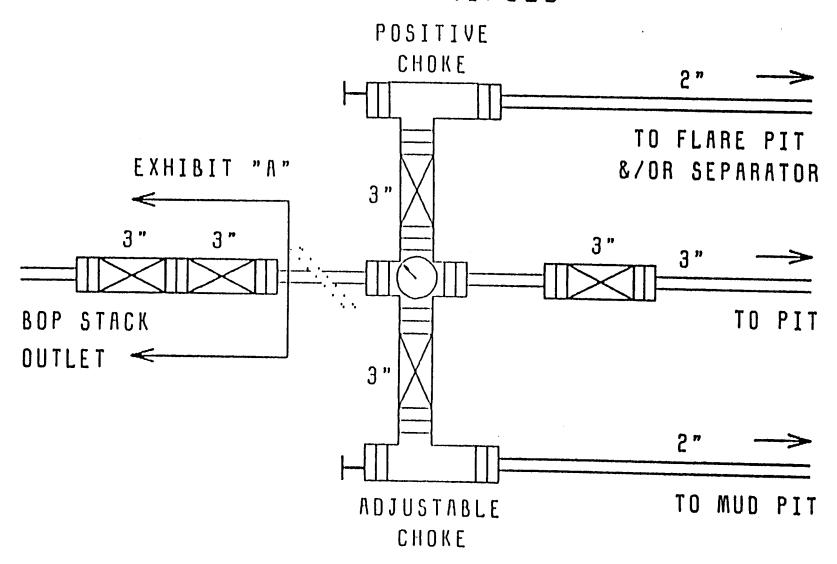


EXHIBIT "A" BLOWOUT PREVENTER ROTATING HEAD MUD TO PIT PIPE RAMS BLIND RAMS EXHIBIT 3 " DRILLING SPOOL KILL TO CHOKE MANIFOLO CHECK LINE VALVE CASING HEAD

EXHIBIT "B" CHOKE MANIFOLD



)

)

CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN Runway 2M

Section 2, Township 40 South, Range 25 East 330' FSL, 280' FWL San Juan County, Utah

SURFACE FORMATION:

Geological name of surface formation: Morrison

ELEVATION:

Surface elevation is 5236' GR/ 5249' KB

ESTIMATED FORMATION TOPS

DEPTH	FORMATION	SUB-SEA ELEV.
1284'	Navajo	+3965'
1914'	Chinle	+3335'
3037'	DeChelly	+2212'
3127'	Organ Rock	+2122'
3824'	Cedar Mesa	+1425'
4924'	Hermosa	+325
5822'	upper Ismay	-573 '
5955'	lower Ismay	-706' Secondary
6024'	Desert Crk	-775' Primary
6180'	Akah	-931'
6299'	Total Depth	-1050'

4. PROPOSED CASING/CEMENTING PROGRAM

	DEPTH	SIZE	WEIGHT	GRADE	COUPLING
SURFACE PROD.	500' 5, 4 50'	8 5/8" 5 1/2"	24.0 ppf 15.5 ppf		STC STC

SURFACE CEMENTING:

371 sx Class 'G' Cement with 2% CaCl and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Slurry volume will be calculated at 100% excess over annular volume.

PRODUCTION CEMENTING:

First Stage

TD to 3500' (stage collar @ +3500'). Lead with 168 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft3/sk. Tail with 100 sx Class 'G' cement with 2% CaCl2. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Total of 426 ft3.

SECOND STAGE

3500' to surface. Lead with 271 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield + 1.85 ft/sk. Tail with 100 sx Class 'G' cement with 2% CaCl2. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Total of 616 ft.3

NOTE: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

5. BLOWOUT PREVENTER (SEE ATTACHED SCHEMATICS)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per attached Exhibits "A" and "B". This will be a 10" x 900 series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel, lime and native solids. Weight 8.3 - 8.7 ppg. Gel/lime sweeps are necessary for hole cleaning.

3500' to TD

Low solids, non-dispersed polymer system. Weight 8.6 - 8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTS.

7. AUXILIARY EQUIPMENT

- A. A kelly cock will be installed during drilling operations, with handle available on rig floor.
- B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD - 4000'

Drill stem testing will be as per the wellsite geologists' recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H2S gas is not anticipated, however, regular checks will be made while drilling the well.

10. TIMING

The drilling and evaluation of this well is estimated be 18 days. Anticipated drilling will be March '92.

DETAILED DRILLING PROGRAM

DATE: February 25, 1992

WELL NAME: Runway WELL NO.:2M

LOCATION: Section 2-T40S-R25E

330' FSL, 280' FWL San Juan County, Utah

ELEVATION: 5236'GR/5249'KB

TOTAL DEPTH: 5,249'KB

PROJECTED HORIZON: Primary Target is Desert Crk @ 6024'

Secondary Target is lower Ismay @ 5955'

DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up rotary tools. Notify PLM of time of spud.

- 2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
- 3. Drill 12 1/4" hole to +/- 515'. Use fresh water gel/ lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1 degree at 500'. Deviation surveys will be run at least at 250' and at casing point.
- 4. Run 8 5/8", 24 lb/ft, K-55, ST&C casing to TD. Cement with 371 sx (427 ft3) of Class 'G' cement with 2% CaCl2 and 1/4 #/sk Celloflake (sufficient slurry volume to circulate cement to surface.)
- 5. W.O.C. a minimum of 4 hours prior to nippling up for BOP stack and related equipment. See BOP schematics for details.
- 6. Ensure that plug has been down at least 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,000 psig for 30 minutes. Pressure test manifold and all related equipment to 2000 psig. Pressure test casing to 1500 psig for 30 min.
- 7. Drill out surface casing with 7/8" bit. Drill 7/8" hole to TD. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first.

 Maximum allowable deviation will be 5 degree @ TD, with maximum allowable rate of change to be 1 degree per 100'.

- 8. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per well site geologist's recommendation.
- 9. If the well is determined to be productive run 5 1/2" casing to TD., as per casing program in 10 Point Drilling Plan. Set stage cementing collar at +/- 3,500 ft. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the Navajo and DeChelly formations, as per BLM stipulations. Cement production casing in two stages as per cementing program in 10-Point Drilling Plan.
- 10. Nipple down BOPE. Set 5 1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.
- 11. If well is non-productive it will be plugged and abandoned as per State, BLM, and Navajo Tribal stipulations.

Runway 2M Section 2, T40 South, R25 East 330' FSL, 280' FWL San Juan County, Utah

GENERAL COMPLETION PROCEDURE:

If the well is determined to be productive, move in completion rig. Perforate, acidize, and test each productive porosity zone. Completion work will commence after Sundry Notice approval is received. Detailed procedures will follow.

PLUGGING AND ABANDONMENT:

If the well is determined not to be productive, the well bore will be plugged as per BLM, State and BIA requirements.

Runway 2M Section 2, T40 South, R25 East 330' FSL, 280' FWL San Juan County, Utah

1. EXISTING ROADS

Shown on the attached topographic map are the existing roads in the immediate area. Outlined is the route to be followed to Montezuma Creek. Existing roads will be maintained, as needed, while operations are in progress.

2. PLANNED ACCESS ROAD

The access road will be as shown on the attached topographic map. The road will be maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established. 2300' ft of new road will be constructed for access to the location pad.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

There are no other producing wells or facilities in the immediate area.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

No production facilities are presently in place. Should the well prove to be productive, facilities (tank battery etc) will be sited on the drilling location pad.

LOCATION AND TYPE OF WATER SUPPLY

Water will be acquired from the San Juan River or McElmo Creek and will be hauled using Chuska Energy Company water trucks, under State of Utah Division of Water Rights Permit Numbers 09-1724, (T64796) or 09-1723 (T64795).

6. SOURCE OF CONSTRUCTION MATERIAL

The need for additional construction materials is not anticipated. In the event that additional materials are required, they will be acquired either from private sources or with the approval of the Navajo Nation.

7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed bin. It will be hauled to an approved disposal site or burned on location if a burning permit is granted. The reserve pit will be lined as required, with an approved 7 mil liner, for containing drilling fluids. The pit will also be fenced. All drilling fluids, cuttings and chemical waste will be stored in the reserve pit. Liquid hydrocarbons will be stored in temporary storage tanks and hauled from location to approved sales facilities. The reserve pit will be emptied, back filled and restored to natural terrain status upon completion of drilling operations.

8. ANCILLARY FACILITIES

Chemical portable toilet facilities will be provided on location during drilling and completion operations. No camps or air strips are planned for this well.

9. WELL SITE LAYOUT

Attached is a surveyor's staking plat, cut and fill diagram and a schematic of the proposed rig layout.

10. PLANS FOR RESTORATION OF THE SURFACE

After drilling operations are completed, the location and surrounding area will be cleared of all remaining debris and materials not required for production. Compacted areas will be plowed or ripped to a depth of 12 to 16 inches before reseeding. The existing reserve pit will be used. After drilling operations are complete, drilling fluid in the reserve pit will be allowed to evaporate. All remaining fluid in the pit will be disposed into an approved disposal site. The reserve pit will remain fenced during the evaporation and disposal process. The pit will then be covered and topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/BIA stipulations. There are no residents in the immediate area of the site.

11. OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY 3315 BLOOMFIELD HIGHWAY FARMINGTON, NM 87401 Barry A. Wieland

12. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drill site and access route: that I am familiar with the conditions which presently exist: that the statements made in this plan are, to the best of my knowledge, true and correct and that the work planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.

Barry A. Wieland

Operations Engineer



CHUSKA ENERGY COMPANY

1775 SHERMAN STREET - SUITE 1800 • DENVER, COLORADO 80203

March 27, 1992

UTAH BOARD OF OIL, GAS AND MINING Suite 350, 3 Triad Center 355 West North Temple Salt Lake City, Utah 84180-1203

Attn: Mr. Ron Firth

DIVISION OF OIL, GAS & MINING

Re: Request for Administrative Approval Exception Location, Chuska Energy Co.

Runway 2-M Well, Section 2, T40S-R25E

San Juan County, Utah

Gentlemen:

Chuska Energy Company plans to drill our Runway 2-M well at an "exception location" in the SW/4 of SW/4 of Section 2, Township 40 South, Range 25 East, SLM in San Juan County, Utah. The specific location is:

330' FSL and 280' FWL of said Section 2, T40S-R25E

The plat attached hereto as Exhibit "A" depicts those owners affected by the above reference well. As indicated on Exhibit "A", the State of Utah owns the oil and gas mineral rights under the proposed drillsite. These oil and gas mineral rights covering the drillsite are currently leased to OXY USA, INC. (formally Cities Service Oil & Gas Corporation) under State Lease Number ML-41082, dated March 1, 1984. By Farmout Agreement dated August 23, 1991, as amended, OXY USA, Inc., has assigned to Chuska Energy Company the exclusive right to conduct drilling operations upon said leased premises in order to earn an interest is the subject lease. Also, attached hereto and marked Exhibit "D" is a Designation of Agent or Operator form executed by OXY USA, Inc.

The three direct and diagonal quarter sections which could be affected by drainage from the proposed well (hereinafter referred to as "Offset Tracts") are described as follows:

TOWNSHIP 40 SOUTH, RANGE 25 EAST, SLM:

Section 3: SE/4 SE/4 Section 10: NE/4 NE/4 Section 11: NW/4 NW/4

The oil and gas rights to said Offset Tracts are governed by that certain Operating Agreement dated February 18, 1987 between Chuska Energy Company (Operator) and the Navajo Tribe of Indians (Mineral Owner). By letter dated March 12, 1992, copy attached hereto as Exhibit "C", the Navajo Tribe has granted its consent to this proposed drillsite, provided a Communitization Agreement is established in the event the well is completed as a producing well.

Utah Board of Oil, Gas and Mining March 17, 1992
Page 2

In as much as Utah Board of Oil, Gas and Mining Rule No. R615-3-2 governs the location of drillsites on the subject State of Utah lease, Chuska Energy Company hereby request administrative approval by the Utah Board of Oil, Gas and Mining to the above referenced drillsite location as an exception to its Rule No. R615-3-2.

As indicated on the Geological Plat attached hereto as Exhibit "B", it is necessary to position this proposed well at the above referenced location in order to maximize the probability of encountering hydrocarbon substances in commercial quantities and to prevent waste by the drilling of uneconomic locations. Based on current information available to us, we do not feel an optimum drillsite can be located within the window of tolerance as specified by Rule No. R615-3-2.

Please acknowledge your administrative approval of this request for an exception to Rule No. R615-3-2 by returning to Chuska Energy Company a copy of this letter with the appropriate approval of the State of Utah indicated thereon.

RECEIVED

MAR 3 0 1992

DIVISION OF OIL, GAS & MINING

Sincerely, William C Mitchell

William C. Mitchell Regional Land Manager

STATE OF UTAH APPROVAL AND DATE:

cc: Oxy U.S.A. Inc.

UTAH.327 sjp/WCM LAW OFFICES

PRUITT. GUSHEE & BACHTELL

SUITE 1850 BENEFICIAL LIFE TOWER

SALT LAKE CITY, UTAH 84111 (801) 531-8446

March 30, 1992

TELECOPIER (801) 531-8468 OR (801) 533-9223

> OF COUNSEL MICHAEL F. JONES BRENT A. BOHMAN

Hand-Delivered

FREDERICK M. MACDONALD

ROBERT G. PRUITT, JR.

OLIVER W. GUSHEE, JR.

THOMAS W. BACHTELL

JOHN W. ANDERSON

ANGELA L. FRANKLIN K. ALLEN FARBER

A. JOHN DAVIS, III

Mr. Ron Firth, Assistant Director Utah Division of Oil, Gas & Mining Suite 350, No. 3 Triad Center 355 West North Temple Salt Lake City, Utah 84180

Re:

Request for Administrative Approval Exception Location, Chuska Energy Co. Runway 2-M Well, Section 2, T40S-R25E, San Juan County, Utah

Dear Mr. Firth:

Enclosed please find the original request for exception location of Chuska Energy Company with respect to the above reference well and lands. The lands are State owned covered by State Lease ML-41082. Chuska would like to begin operations for drilling the well on April 1, 1992. Therefore, your expedited attention to this matter would be greatly appreciated.

By this transmittal I am also forwarding a copy of the Request to Tom Mitchell, Esq., for his review and consultation with you, as suggested by you. If either you or Mr. Mitchell perceive any problem with the enclosed Request please advise at your earliest convenience.

Very truly yours,

Thomas W. Bachtell

TWB:lmg 1450.00

cc: Tom Mitchell, Esq.

William C. Mitchell, Regional Land Manager

RECEIVED

DIVISION OF OIL, GAS & MINING

OWNERSHIP MAP

R 25 E CITIES SERVICE OIL & GAS CORP (AKA) OXY USA INC. ML-41082 Exp. 3/1/94 T STATE OF UTAH MINERALS 40 400' Window of Tolerance S \parallel NAMAJO INDIAN MINERALS VAJO INDIAN MINERALS



DIVISION OF OIL, GAS & MINING

PROPOSED WELL LOCATION

CHUSKA ENERGY CO., RUNWAY 2-M 330' FSL & 280' FWL SECTION 2, T40S-R25E SAN JUAN COUNTY, UTAH

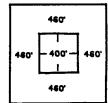


Subject to Chuska Operating with Navajo Tribe



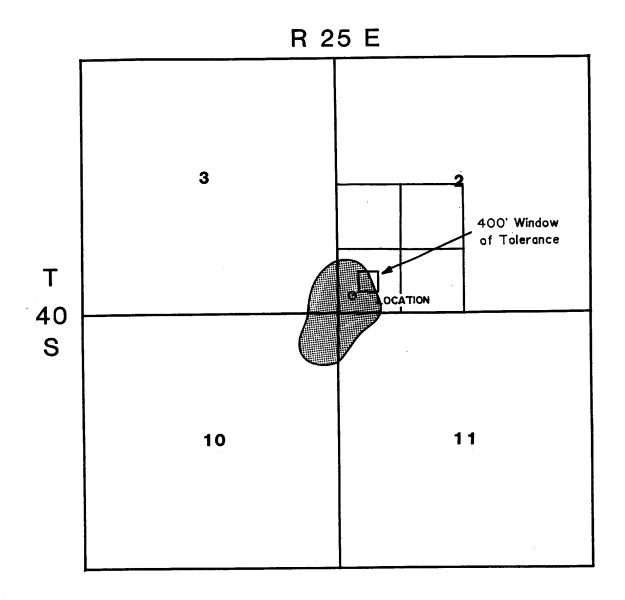
Acreage Farmed-in by Chuska from OXY USA INC. ENLARGEMENT

400' Window of Tolerance



SCALE: 1"= 2000"

EXHIBIT "B" Geologic Plat



PROPOSED WELL LOCATION

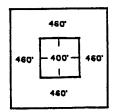
CHUSKA ENERGY CO., RUNWAY 2-M 330' FSL & 280' FWL SECTION 2, T40S-R25E SAN JUAN COUNTY, UTAH

MECETYEU

MAR 3 0 1992

DIVISION OF OIL, GAS & MINING **ENLARGEMENT**

400' Window of Tolerance





THE **NAVAJO NATION**

MAR 181992

DENVER - LAND

P.O. BOX 308

WINDOW ROCK, ARIZONA 86515

(602) 871-4941

PETERSON ZAH **PRESIDENT**

MARSHALL PLUMMER VICE PRESIDENT

March 12, 1992

Mr. William C. Mitchell Regional Land Manager Chuska Energy Company 1775 Sherman Street, Suite 1800 Denver, Colorado 80203

> Chuska Energy Company Runway 2-M Well RE: State of Utah Lease Number ML - 41082 Section 2, T40S, R25E, San Juan Co.



MAR 3 0 1992

DIVISION OF OIL. GAS & MINING

Dear Mr. Mitchell:

This is in response to your letter of March 11, 1992, in which you requested a formal letter of consent to the drilling of the proposed Runway 2-M well. We understand that the proposed location (330' FSL and 280' FWL, Section 2, T40S, R25E) is within State of Utah Lease Number ML 41082, but is sufficiently close to the section boundaries that a producing well is likely to drain Navajo Nation oil and gas. Navajo Nation acreage within the radius of probable drainage has been designated by Chuska in drilling blocks pursuant to the 1987 Operating Agreement. The Navajo Nation Minerals Department approves the nonstandard well location subject to the condtions listed below:

- If a drillhole is completed as a producing well, a communitization or other pooling agreement must be negotiated between the operator, the Nation and the mineral interest owner of the lands in Section 2. participation factors would be calculated to each participant's satisfaction using standard oil field practices based upon engineering, seismic and well test data used to define the reservoir characteristics.
- Any portion of of the lands subject to that certain Operating Agreement dated July 20, 1987 between the Navajo Nation and Chuska Energy Company not included within the communitized area will be segregated from the portion included within the communitized area. communitized area will be restricted to reasonably considered to cover the radius of drainage of the proposed well. Upon expiration of the primary term of the 1987 operating agreement, the well will hold by

virtue of production only that acreage included within the communitized area.

If you have any questions, please do not hesitate to contact me at (602) 871-6587.

Sincerely,

MINERALS DEPARTMENT

Akhtar Zaman Director

xc: Mrs. Genni Denetsone, Real Property Officer, BIA-NAO

MAR 3 0 1992

DIVISION OF OIL, GAS & MINING

EXHIBIT "D"

STATE OF UTAH OLVISION OF DIL, GAS AND MINING



DESIGNATION OF AGENT OF	R OPERATOR - FORM 5	, -
		DIVISION OF
The undersigned is, or	record, the holder of oll and gas lease	OIL, GAS & MININ
LEASE NAME:	State of Utah. dated effective 3/1/84	
LEASE NUMBER:	ML-41082	•
and hereby designates	di sha dasana	
	Chuska Energy Company	
ADDRESS:	1775 Sherman St., Suite 1800, Denver, CO	80203
the terms of the lease Director or Authorized compliance with the Oi the Board of Oil, Gas	with full authority to act in his behalf and regulations applicable thereto and on Agent may serve written or oral instruction and Gas Conservation Gameral Rules and Fand Mining of the State of Utah with respendesignation is applicable):	whom the Division on the securing of the securing of the secural Rules of the securing of the
in the event a faces of Ofi, Gme and Mini	mile of this Designation of Agent or Operator is submitted ng, then said faceimile shall for all purposes be deemed a	i to the Board n original.
	•	
lessee of responsibili and Gas Conservation G and Mining of the State	this designation of agent/operator does no ty for compliance with the terms of the le eneral Rules and Procedural Rules of the B e of Utah. It is also understood that thi not constitute an assignment of any inter	ase and the Oll oard of Oll, Gas s designation of
make full and prompt co	the part of the designated agent/operator, ompliance with all rules, lease terms or o of the State of Utah or its authorized re	rders of the Board
The lessee agrees promany change in this des	otly to notify the Division Director or Audignation.	thorized Agent of
Effective Date of Design	nation 3-24-92 By: Mun-	
	71tle: J. P. Thomas,	igre)
Address Box 12021		(E)
07 - 12 - 14 - 14 - 14 - 17 - 17 - 17 - 17 - 17		. <u> </u>

PERATOR Chusho Energy Co N. 9090. DATE -4-7-90
IELL NAME RECOLLAY OM
SEC SUSU O T 405 R OUTE COUNTY LAINTIAN
43-037-31680 State (3) API NUMBER TYPE OF LEASE
CHECK OFF:
PLAT. NEAREST WELL
LEASE FIELD POTASH OR OIL SHALE
PROCESSING COMMENTS: No other producing well without beco.
1. atil Permit 09-1704 (T64796) or 09-1706 (T64795)
Pusite 4-7-90
1 listil 1 1 list
••••
APPROVAL LETTER:
SPACING: R615-2-3 NA R515-3-2
CONFIDENTIAL R615-3-3 PERIOD
CAUSE NO. & DATE EXPIRED ON 10-4-93
STIPULATIONS: // / D-: D Cold Cold
+ Notefy And Silver of Specific to the
Orande.
A Notification to the Division when drilling.
operations commence and at least it how
no Africating river to commencing surface Casing.
0218T .

PRUITT, GUSHEE & BACHTELL

SUITE 1850 BENEFICIAL LIFE TOWER

SALT LAKE GITY, UTAH 84111

(801) 531-8446

TELECOPIER (80I) 53I-8468 OR (80I) 533-9223

> OF COUNSEL MICHAEL F. JONES BRENT A. BOHMAN

June 1, 1992

HAND DELIVERED

ROBERT G. PRUITT, JR.

OLIVER W. GUSHEE, JR.

THOMAS W. BACHTELL A. JOHN DAVIS, III

FREDERICK M. MACDONALD

JOHN W. ANDERSON

ANGELA L. FRANKLIN K. ALLEN FARBER

> Mr. Ron Firth, Assistant Director Utah Division of Oil, Gas & Mining 3 Triad Center, Suite 350 355 West North Temple Salt Lake City, Utah 84180

JUN 0 1 1992

DIVISION OF OIL GAS & MINING

Re:

Request for Administrative Approval Exception Location, Chuska Energy Company Runway 2-M Well, Section 2, T40S-R25E, SLM, San Juan County, Utah

Dear Ron:

Enclosed please find the following letters:

- 1. Original letter dated May 6, 1992 addressed to you from William C. Mitchell, Regional Land Manager for Chuska Energy Company;
- 2. Copy of a letter dated May 26, 1992 addressed to me from Edward W. Bonner, Minerals Section Manager, Division of State Lands and Forestry.

The first letter is in response to your request for additional information regarding the reasons that Chuska believes the chosen well location is the optimum site. As you can see, Chuska conducted a high density CDP Swath seismic program across the geological feature and has based its geological analysis on this seismic data.

The second letter shows that the Utah Division of State Lands and Forestry has now accepted the Statewide Bond No. B03570 of Double R, Inc., Sunfield Energy Company, and Chuska Energy, Inc.

Mr. Ron Firth June 1, 1992 Page 2

I believe this is responsive to the conditions we previously discussed that postponed your administrative approval of Chuska's exception location request.

Very truly yours,

Thomas W. Bachtell

TWB:cs 1458.00 enclosures \1458\correspd\Firth-2.ltr



HUSKA ENERGY COMPANY

1775 SHERMAN STREET - SUITE 1800 • DENVER, COLORADO 80203 • PHONE: (303) 863-7021 FAX #: (303) 863-7210 May 6, 1992

Mr. Ron Firth, Assistant Director Utah Division of Oil, Gas & Mining Suite 350, No. 3 Triad Center 355 West North Temple Salt Lake City, Utah 84180

> Chuska Energy - Runway 2-M Well Re: SW/4 SW/4 Section 2, T40S-R25E

San Juan County, Utah

Dear Mr. Firth:

With regard to Chuska Energy Company's March 27, 1992 request for an Exception to Rule No. R615-3-2 relative to the captioned well, you have requested that (1) Chuska secure an oil and gas operator's bond to cover operations on State of Utah lands and file copy of same with the Utah Division of State Lands and Forestry and (2) Chuska furnish your office with a statement of the scientific basis upon which the captioned drillsite has been selected.

Please be advised that Chuska has recently filed the appropriate bond with the Utah Division of State Lands & Forestry. With regard to the selection of the drillsite for the captioned well, Chuska has conducted a high density CDP Swath seismic program across this geological feature and has based its geological analysis on this seismic data.

Please do not hesitate to give me a call if you have any further question pertaining to our request for administrative approval of this Exception Location.

Sincerely,

William C. Mitchell Regional Land Manager

lliam C. Mitchell

Norman H. Bangerter Governor Dee C. Hansen Executive Director Richard J. Mitchell

Division Director

355 West North Temple 3 Triad Center, Suite 400 Salt Lake City, Utah 84180-1204 801-538-5508 801-355-0922 (Fax)

May 26, 1992

Double R, Inc.
Sunfield Energy Company
Chuska Energy, Inc.
c/o Thomas W. Bachtell
Pruitt, Gushee & Bachtell
Beneficial Life Tower, Suite 1850
Salt Lake City, UT 84111

Dear Mr. Bachtell:

RE: Acceptance of Statewide Bond of Lessee Bond No. B03570

This letter is to confirm that on May 26, 1992, the Director of the Division of State Lands and Forestry accepted an \$80,000 State of Utah Statewide Bond of Lessee, Bond No. B03570, with Double R, Inc., and its wholly owned subsidiaries Sunfield Energy Company and Chuska Energy, Inc., as principal and Underwriters Indemnity Company as surety.

If you have any questions concerning this matter, please contact this office.

Sincerely,

EDWARD W. BONNER

MINERALS SECTION MANAGER

tdw



LAW OFFICES

PRUITT, GUSHEE & BACHTELL

SUITE 1850 BENEFICIAL LIFE TOWER

SALT LAKE CITY. UTAH 84111 (801) 531-8446

TELECOPIER (801) 531-8468 OR (801) 533-9223

> OF COUNSEL MICHAEL F. JONES BRENT A. BOHMAN

June 1, 1992

COPY

HAND DELIVERED

ROBERT G. PRUITT, JR.

OLIVER W. GUSHEE, JR.

THOMAS W. BACHTELL

FREDERICK M. MACDONALD

JOHN W. ANDERSON

ANGELA L. FRANKLIN K. ALLEN FARBER

A. JOHN DAVIS, III

Mr. Ron Firth, Assistant Director Utah Division of Oil, Gas & Mining 3 Triad Center, Suite 350 355 West North Temple Salt Lake City, Utah 84180 DIN 0 1 1992

DIVISION OF OIL GAS & MINIMO

Re:

Request for Administrative Approval Exception Location, Chuska Energy Company Runway 2-M Well, Section 2, T40S-R25E, SLM, San Juan County, Utah

Dear Ron:

Enclosed please find the following letters:

- 1. Original letter dated May 6, 1992 addressed to you from William C. Mitchell, Regional Land Manager for Chuska Energy Company;
- 2. Copy of a letter dated May 26, 1992 addressed to me from Edward W. Bonner, Minerals Section Manager, Division of State Lands and Forestry.

The first letter is in response to your request for additional information regarding the reasons that Chuska believes the chosen well location is the optimum site. As you can see, Chuska conducted a high density CDP Swath seismic program across the geological feature and has based its geological analysis on this seismic data.

The second letter shows that the Utah Division of State Lands and Forestry has now accepted the Statewide Bond No. B03570 of Double R, Inc., Sunfield Energy Company, and Chuska Energy, Inc.

Mr. Ron Firth June 1, 1992 Page 2

I believe this is responsive to the conditions we previously discussed that postponed your administrative approval of Chuska's exception location request.

Very truly yours,

Thomas W. Bachtell

TWB:cs 1458.00

enclosures

\1458\correspd\Firth-2.ltr



CHUSKA ENERGY COMPANY

1775 SHERMAN STREET - SUITE 1800 • DENVER, COLORADO 80203 • PHONE: (303) 863-7021 FAX #: (303) 863-7210

Mr. Ron Firth, Assistant Director Utah Division of Oil, Gas & Mining Suite 350, No. 3 Triad Center 355 West North Temple Salt Lake City, Utah 84180

Re: Chuska Energy - Runway 2-M Well SW/4 SW/4 Section 2, T40S-R25E

San Juan County, Utah

Dear Mr. Firth:

With regard to Chuska Energy Company's March 27, 1992 request for an Exception to Rule No. R615-3-2 relative to the captioned well, you have requested that (1) Chuska secure an oil and gas operator's bond to cover operations on State of Utah lands and file copy of same with the Utah Division of State Lands and Forestry and (2) Chuska furnish your office with a statement of the scientific basis upon which the captioned drillsite has been selected.

Please be advised that Chuska has recently filed the appropriate bond with the Utah Division of State Lands & Forestry. With regard to the selection of the drillsite for the captioned well, Chuska has conducted a high density CDP Swath seismic program across this geological feature and has based its geological analysis on this seismic data.

Please do not hesitate to give me a call if you have any further question pertaining to our request for administrative approval of this Exception Location.

Sincerely,

William C. Mitchell Regional Land Manager



State-of Utah DEPARTMENT OF NATURAL RESOURCES DIVISION OF STATE LANDS AND FORESTRY

Norman H. Bangerter Governor Dee C. Hansen Executive Director Richard J. Mitchell Division Director

355 West North Temple 3 Triad Center, Suite 400 Salt Lake City, Utah 84180-1204 801-538-5508 801-355-0922 (Fax)

May 26, 1992

Double R, Inc.
Sunfield Energy Company
Chuska Energy, Inc.
c/o Thomas W. Bachtell
Pruitt, Gushee & Bachtell
Beneficial Life Tower, Suite 1850
Salt Lake City, UT 84111

Dear Mr. Bachtell:

RE: Acceptance of Statewide Bond of Lessee Bond No. B03570

This letter is to confirm that on May 26, 1992, the Director of the Division of State Lands and Forestry accepted an \$80,000 State of Utah Statewide Bond of Lessee, Bond No. B03570, with Double R, Inc., and its wholly owned subsidiaries Sunfield Energy Company and Chuska Energy, Inc., as principal and Underwriters Indemnity Company as surety.

If you have any questions concerning this matter, please contact this office.

Sincerely,

EDWARD W. BONNER

MINERALS SECTION MANAGER

tdw



State of Utah DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203 801-538-5340

June 2, 1992

Chuska Energy Company 3315 Bloomfield Highway Farmington, New Mexico 87401

Gentlemen:

Re: Runway 2M Well, 330 feet from the south line, 280 feet from the west line, SW 1/4 SW 1/4, Section 2, Township 40 South, Range 25 East, San Juan County, Utah

Pursuant to Utah Admin. R. 649-3-3 and Utah Admin. R. 649-3-4, approval to drill the referenced well is hereby granted.

In addition, the following specific actions are necessary to fully comply with this approval:

- 1. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.
- 2. Provide notification to the Division when drilling operations commence and at least 24 hour notification prior to commencing surface casing cementing operations.
- 3. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
- 4. Submittal of the Report of Water Encountered During Drilling, Form 7.
- 5. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or R.J. Firth, Associate Director, (Home) (801)571-6068.

Page 2 Chuska Energy Company Runway 2M Well June 2, 1992

6. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.

Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site should be submitted to the local health department. These drilling operations and any subsequent well operations should be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Department of Environmental Quality, Division of Drinking Water/Sanitation, telephone (801)538-6159.

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-037-31680.

Sincerely,

Associate Director, Oil and Gas

ldc

Enclosures

CC:

Bureau of Land Management

J.L. Thompson

WOI1

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: CHUSKA	43-037-31680
WELL NAME: RUNWAY 2-M	
Section 2 Township 40S	Range 25E County SAN JUAN
Drilling Contractor	AZTEC
Rig #	
SPUDDED: Date 8/22/92	
Time 1:00 AM	CONFIDENTIAL
HowROTARY	
Drilling will commence 8/22/9	2
Reported by LARRY CHAMBERS	
Telephone #	
Date8/21/92	SIGNEDFRM

STATE OF UTAH DIVISION OF OIL, GAS AND MINING ENTITY ACTION FORM - FORM 6

OPERATOR _	CHUSKA	ENERGY	COMPANY	
ADDRESS		,		

OPERATOR ACCT. NO. N 9290

Phone No. (

Title

Date

		NEW	API NUMBER		WELL NAME				WELL	OCATION		SPUD	EFFECTIVE
ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	APT NUMBER		WELL 17.410		QQ	SC	TP	RG	COUNTY	DATE	DATE
A	99999	11413	43-037-31680	RUNWAY	2M		SWSW	2	40S	25E	SAN JUAN	8-22-92	
WELL 1 C	OMMENTS:	ENTITY AD	DDED 9-18-92.	/				_			·		
)													
WELL 2 C	OMMENTS:	•	·										
								ı	T	1	T		
			·										
WELL 3 (COMMENTS:												
									T	T			<u> </u>
								<u> </u>					
WELL 4	COMMENTS:												
)													
WELL 5	COMMENTS:	<u> </u>			.~								
		·										(T. O. T.)	
A	- Establis	h new entity	s on back of form) y for new well (si sting entity (grou one existing enti	ngle well only n or unit well		ty					L. ROMERO Signature ADMIN. AN		9-18-9
L L	- Ke-assiy	33 6	and existing enti	ty to a new en	tity								

(3/89)

D - Re-assign well from one existing entity to a new entity E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

Well File 9-3-92 I tooked w/ Berry leherelin 08 Chuska today. They see going to PAA the # ZM well starting this afternoon. I reviewed the Plugging program with him, lope Ot. Attached is a diagram Slowing Hum proposed plugs. Chuska Tunway 2M Sec 2 -405-25E API 43-037-31680

Lease: ML -41082 Well #: 2M

ş* •

Spud Date: Ø8/22/1992 KB: 5249 TD: Ø

Comp Date: ELEV: 5236 PBTD: Ø

API #: 43-037-31680-Location: Sec 2 Twn 40S Rng 25E County: San Juan State: Utah Field: Wildcat Operator: Chuska Energy Company

Start End Size Hole Ø. Ø 425. Ø 12. 25Ø Hole: 425. Ø 6162. Ø 7. 875 Hole: Casin Ø. Ø 425. Ø 8. 625 Casin	Surface Production
425.0 6162.0 7.875 Hole:	Production
Casin	g
Casin	g
	g
Ø. Ø 425. Ø 8. 625 Casin	
	g: Surface
Plug(s)
62Ø- Ø.Ø 5Ø.Ø 12.25Ø Plug:	
375. Ø 425. Ø 12. 25Ø Plug:	
425.Ø 475.Ø 7.875 Plug:	9Ø sxs 100% excess
	80 sxs "
1840.0 1940.0 7.875 Plug:	00 SXS
2980.0 3080.0 7.875 Plug:	125 888
1240- 4860.0 4960.0 7.875 Plug: 5836.0 6162.0 7.875 Plug:	
5836.Ø 6162.Ø 7.875 Plug:	200 sxs
Start End Length Cemen	t
Ø. Ø 425. Ø 425. Ø Cemen	t: To Surface
Forms	tion(s)
Ø. Ø 855. Ø 855. Ø Forma	tion: Morrison ?
1860— 855. Ø 1275. Ø 420. Ø Forma	tion: Entrada
	tion: Navajo
	tion: Chinle
	tion: Chinle
	tion: DeChelly
	tion: Hermosa
5836.Ø 5968.Ø 132.Ø Forma	tion: Upper Ismay
5968.0 6062.0 94.0 Formo	tion: Lower Ismay
2480— 6062.0 6134.0 72.0 Forms	tion: Desert Creek
6134. Ø 6162. Ø 28. Ø Forma	tion: Chimney Rock
0137.0 0102.0 20.0 101	tion: Akah to TD
6162.Ø 6175.Ø 13.Ø Forma	CIOII. ARGII CO ID
	i
	1
3100	
	1
	1
	1
	1
	1
3720-	
	\
	İ
4340-	
	Ì
4960-	
	l
	İ
	l
	i
5580-	

DIVISION OF OIL, GAS AND MINING

					i. Lease Designation and Serial No.
		•		-	ML-41082
	N FOR PERMIT T	O DRILL, DEE	PEN, OR PLU	G BACK	6. If Indian, Allottee or Tribs Name
ia. Type of Work DR	RILL [X]	DEEPEN [81.16		. Unit Agreement Name
L Type of Weil		DC2. 5.1 [PLUC	BACK [N/A
	Gas Uther Other		Single C	Multiple Zone	5. Farm or Lease Name
Name of Operator					Runway 2M
Chuska Energy	Company			·····	9. Weil No.
	Id Wichman Farmi		01 ;	_	10. Fiend and Pool, or Wildcat
	d Highway, Farmi		U l M requirements.*1		Wildcar Under one Le
330	FSL 280 FWL	~ 6/c)			11. 20. sec., i., 2., n., er sib.
At proposed prod. con	• Same				
i. Distance in miles an	u nirection from nearest tow	n or post office.		······································	2-40S-25F
	orth of Aneth, Ut				_
5. Distance from propo- location to nearest			No. of acres in lease	17. No. e	San Juan Urah
property or lease lin (Also to nearest drie	e. ft. 280 t			· to thi	s weil
i. Distance from propo to nearest well, drill	sed location*	_	Рторожен черка		y or cable tools
or applied for, on the	ener DF, RT, GR, etc.)	` '	6299' AKAh	Ro	tary
236 GR/ 5249			-	3	May 19, 1992
-		2000057 615006 6	1D (001/001/001/001/001/001/001/001/001/001		137. 137.
C: U		PROPOSED CASING AN		CRAM .	
Size of Hote	Size of Casing	Weight per Foot	Setting Depth		Quantity of Coment
2 1/4 _7/8	8 5/8 5 1/2		500'		k-55, 371 sx
	3-1//	15.5ppf	5450		K-55.
	SEE ATTACHED F	OR 10 POINT	RILLING PLAN	AND DETAI	LED DRILLING PROGRAM
•				reversion.	CALLED TO THE STATE OF THE STAT
				I have been been been been been been been be	
					MAR 2 6 1992
				·	
•				[DIVISION OF
				OIL	GAS & MINING
				·	
AROVE NOACE DOW	C3186 36 080522 88052	A.V. 10			
ctive some. If proposal eventer program, if any	I THE TO STATE OF SEADON STREET	onally, give pertinent di	ntr od anosmijske jedri Redou or bind preir E	tions and measur	ont productive some and proposed new pro-
evencer program, it any	at this report is true and				
BA	Wie him)	·	Mar	2 10 02
J. T. Die		Tile	Operations	Manager	Date 3-10-92
A wis since 100 belief	ai or šiais office usei 2. 037. 311.5	K()			
APT NO.	1-001-0110		Anproval Data	A PAPA	
teeming to		- -			OVED BY THE STATE
Conditions of approva	I, il any:	Title	* ************************************		ITAH DIVISION OF
				•	GAS, AND MINING
				DATE: _	3077
3/89)		*See Instructions	On Reverse Side	BY:	Jey / Jattkew
-, 0 <i>3 j</i>				WELL S	PACING 649-3-3
				*****	111011191. 30-

DIVISION OF OIL. GAS AND MINING S. LEASE DESIGNATION AND SERIAL NO. ML-410826. IF INDIAN, ALLOTTES OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT IA. TYPE OF WELL: NA
7. UNIT AGREEMENT NAME L TYPE OF COMPLETION: WELL V S. FARM OR LEASE NAME 2. NAME OF OPERATOR Runway Chuska Energy Company 3. ADDRESS OF OPERATOR 3315 Bloomfield Highway, Farmington, NM 87401 505-326-5525 10. PIELD AND POOL OR WILDCAT 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) Wildcat At surface 330' FSL & 280" FWL 11. SEC., T., R., M., OR BLOCK AND SURFEY OR AREA At top prod. interval reported below Same At total depth Sec 2-T40S-R25E 14. AFT NO. DATE ISSUED 12 COUNTY Same 6-2-92 Utah 43-037-31680 San Juan 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF. RES, RT. GR. ETC.) 19. ELEV. CASINGESAD (Plug & Abd.) 9-4-92 5249kb 5236gr 21. PLUG BACK T.D., MD & TYD 22. IF MULTIPLE COMPL. 23. INTERVALS BOTART TOOLS CABLE TOOLS Yes No 6160' MD & 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) WAS DERECTIONAL SURVEY MADE NONE 28. TYPE ELECTRIC AND OTHER LOGE RUN CYCLES 9-9-92 17 WAS VELL CORED YES THO CITATION OF DELL MSFL/GR/CFL CNL/FDC/LDT BHC/CAL/GR CBC/CCL/GR ORILL STEM TEST YES 1000 1500 recent rider CASING RECORD (Report all strings set in well) CASING SIZE FEIGHT, LR./FT. DEPTH SET (MD) HOLE SIZE CEMENTING RECORD AMOUNT PRILIPA 5/8 23.0 12 300 sxs CL'G' & 2% CaCl2& 1/4# 428 1/4 sx celloflake LINER RECORD 30 TUBING RECORD BIZZ TOP (MD) BOTTOM (MD) SACES CEMENT SCREEN (MD) SIZE DEPTE SET (MD) PACKER SET (MD) 31. PERFORATION RECORD (Interval, size and number) 32 ACID. SHOT. FRACTURE, CEMENT SQUEEZE, ETC. DEPTE INTERVAL (MD) DEC JAISSTAK TO GNIS GNA THUOMA

33. PRODUCTION PRODUCTION METROD (Flowing, gas lift, pumping—eize and type of pump) WELL STATUS (Producing or shut-in) P&A NONE DATE OF TEST MOURS TESTED CHOKE SIZE PROD'N. FOR 01L-18L GAS-MCF. WATER-BEL CAS-OIL BATIO TEST PERIOD CASING PRESSURE CALCULATED 24-BOUR BATE GAS-MCF. WATER-BRL OIL GRAVITT-API (CORE.) 34. DIRPOSITION OF GAS (Sold, used for fuel, rented, etc.) IE GRESHTIW TERT 35. LIST OF ATTACEMENTS

36. I hereby ceretify that the foregoing and attacked information is complete and correct as determined from all available records

SIGNED DATE 9-9-92

INSTRUCTIONS

This form should be completed in compliance with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments. tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.

separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data and in item 24 show the producinginterval, or intervals, top(s), bottom(s) and name(s) for only the interval reported in item 33. Submit a ITEMS 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, pertinent to such interval.

ITEM 29: "Sacks Cement": Attached supplemental records for this well show the details of any multiple stage cementing and the location of the cementing tool.

ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instruction for items 22 and 24 above)

ŒRS	Too	Heas. Depth Irue Vart. Depth 855 1275 1891 4908 5836 5968 6162
GEOLOGIC MARKERS		Meas. Depth 855 1275 1275 1891 3031 4908 5836 5968 6062 6134 6162
38.	Name	Entrada Navajo Chinle Dechelly Hermosa Upper Ismay Lower Ismay Desert Creek Chimney Rock Akah
UMMARY OF POROUS ZONES: Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool gpen, flowing and shut-in pressures, and recoveries,	Description, contents, etc.	Cut 32AtRec. 27'. Upper Ismay anhydrite & dolomite % dolomite % Excess SXS Cement (yield =1.18) 100 90 100 80 100 70 100 90 50 20
of porosity a , including de and shut-in pr	Bottom	5937 6162 4960 3080 1940 1325 475 50
UNMARY OF POROUS ZONES: Show all important zones of porosity and conte and all drill-stem tests, including depth inte time tool open, flowing and shut-in pressures.	Тор	5905 5836 4860 2980 1840 1225 375
37. SUMMARY OF POROUS ZONES: Show all important zone and all drill-stem test: time tool gpen, flowing	Formation	Core #1 P&A P &A P Lug #1 #3 #4 #4 #6 #7